

93 sample (KNN).

IN THE CLAIMS

Please cancel Claims 1 to 12 and substitute the following Claims 13 to 29 in their place:

13. (New) An alkali metal-containing niobate-based piezoelectric sintering material composition comprising:

a solid solution represented by a composition formula $ANbO_3$, wherein A is an alkali metal; and

at least one additive selected from the group consisting of Cu, Li and Ta.

14. (New) The alkali metal-containing niobate-based piezoelectric sintering material composition according to claim 13, wherein said solid solution is represented by a composition formula $K_{1-x}Na_xNbO_3$, wherein $x = 0$ to 0.8 .

15. (New) The alkali metal-containing niobate-based piezoelectric sintering material composition according to claim 13, wherein said solid solution is represented by a composition formula $Li_x(K_{1-y}Na_y)_{1-x}(Nb_{1-z}Ta_z)O_3$, wherein $x = 0.001$ to 0.2 , $y = 0$ to 0.8 , $z = 1$ to 0.4 .

16. (New) The alkali metal-containing niobate-based piezoelectric sintering material composition according to claim 14, wherein said at least one additive is Cu present in an amount of 0.001 to 5 mol%.

17. (New) The alkali metal-containing niobate-based piezoelectric sintering material composition according to claim 15, wherein said at least one additive is Cu, Li and Ta, each of them present in an amount of not more than 5 mol%.

18. (New) The alkali metal-containing niobate-based piezoelectric sintering material

composition according to claim ~~18~~, wherein said at least one additive is Cu, Li and Ta, the Cu being present in an amount of 0.001 to 5 mol%.

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19. (New) A method for producing an alkali metal-containing niobate-based piezoelectric sintering material composition, comprising:

adding an additive powder containing at least one element selected from the group consisting of Cu, Li and Ta to a powder of niobate represented by formula $ANbO_3$, wherein A is an alkali metal, then blending these powders together;
molding said mixture blended powders and sintering the same.

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20. (New) The method according to claim 19, wherein said sintering process is an atmospheric pressure sintering method or a mechanically pressed sintering method.

21. (New) The method according to claim 20, wherein said sintering process is carried out with a heating method selected from the group consisting of electric furnace heating, microwave heating, high frequency induction heating, and infrared heating.

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22. (New) The method according to claim 19, wherein said additive powder is 0.001 to 5 mol% of Cu, and said powder of a niobate is $K_{1-x}Na_xNbO_3$, wherein $x = 0$ to 0.8.

23. (New) The method according to claim 19, wherein said powder of a niobate is $Li_x(K_{1-y}Na_y)_{1-x}(Nb_{1-z}Ta_z)O_3$, wherein $x = 0.001$ to 0.2, $y = 0$ to 0.8, $z = 0$ to 0.4.

24. (New) The method according to claim ~~23~~, wherein said additive powder is 0.001 to 5 mol% of Cu.

25. (New) A method for producing an alkali metal-containing niobate-based piezoelectric material composition, comprising:

adding an additive powder containing at least one element selected from the group consisting of Cu, Li, and Ta to a mixture of a powder of precursor compounds for the niobate represented by the formula $ANbO_3$, wherein A is an alkali metal, then blending these

powders together

molding said blended powders and sintering the same; and

giving piezoelectricity to the resulting sintered-substance in a process of a treatment.

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26. (New) The alkali metal-containing niobate-based piezoelectric material composition according to claim 15, wherein $x = 0$ to 0.1 , $y = 0$ to 0.8 , $z = 0$ to 0.4 , exclusive of $(x = 0, z = 0)$, $(x = 0.8$ to $0.1, z = 0)$, $(x = 0.1, z = 0.2)$, $(x = 0.1, z = 0.3)$, $(x = 0.08$ to $0.1, z = 0.4)$ for piezoelectric constant (d_{31}).

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27. (New) The alkali metal-containing niobate-based piezoelectric material composition according to claim 15, wherein $x = 0$ to 0.1 , $y = 0$ to 0.8 , $z = 0$ to 0.4 , exclusive of $(x = 0, z = 0)$, $(x = 0.06$ to $0.1, z = 0)$, $(x = 0.1, z = 0.1)$, $(x = 0.08$ to $0.1, z = 0.2)$, $(x = 0, z = 0.3)$, $(x = 0, z = 0.3)$, $(x = 0.08$ to $0.1, z = 0.3)$, $(x = 0$ to $0.02, z = 0.4)$, $(x = 0.08$ to $0.1, z = 0.4)$ for electromechanical coupling factors (k_p).

28. (New) The alkali metal-containing niobate-based piezoelectric material composition according to claim 15, wherein $x = 0$ to 0.2 , $y = 0$ to 0.8 , $z = 0$ to 0.4 , exclusive of $(x = 0, z = 0)$, $(x = 0.06$ to $0.2, z = 0)$, $(x = 0.1, z = 0.1)$ for dielectric loss ($\tan \delta$).

5 29. The alkali metal-containing niobate-based piezoelectric material composition according to claim 16, wherein the amount of Cu is 1 mol% or less.

BASIS FOR THE AMENDMENT

The specification has been amended to correct the typographical errors noted by the Examiner, as well as others.

Claims 13 to 24 parallel original Claims 1 to 12, except that it has now been made clear that the composition is a piezoelectric sintering material, as well as also improving the language.